

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : DOBASHI HIDETAKA

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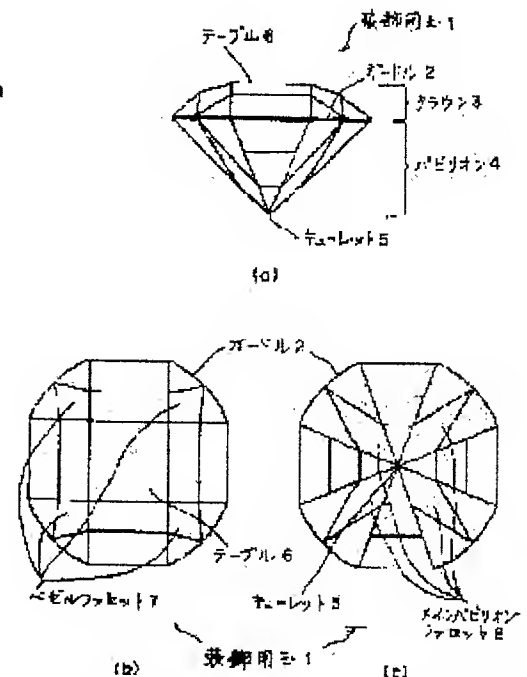
(72)Inventor : DOBASHI HIDETAKA

## (54) CUT FOR GEMSTONE

### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a gemstone to be fixed to a setting with small claws easily.

SOLUTION: The girdle 2 of this gemstone 1 is in the shape of a polygon with each apex cut off by a circular arc. When plural gemstones 1 are mounted on a setting close to each other, the linear parts of the girdles 2 of the stones are made to abut close to each other and gaps are formed between curved parts of the girdles 2. The gemstones 1 are fixed to the setting by inserting claws into the gaps.



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## CLAIMS

[Claim(s)]

[Claim 1] It is the ball for an ornament which is a ball for an ornament and is characterized by a girdle being the appearance which cut off each polygonal top-most vertices with radii.

[Claim 2] Said radii are balls for an ornament according to claim 1 characterized by being on the periphery which set the core of the table of said ball for an ornament as the core of a circle.

[Claim 3] Said polygon is a ball for an ornament according to claim 2 characterized by being a square.

[Claim 4] It is the ball for an ornament according to claim 3 which said square is a square and is characterized by the central angle corresponding to said radii being 45 degrees.

[Claim 5] Said table is a ball for an ornament according to claim 4 which carries out the description of being the square formed of the parallel straight line to each straight-line part of said girdle.

[Claim 6] Die length of one side of said table is a ball for an ornament according to claim 5 characterized by being the same as the die length of the straight-line part of said girdle.

[Claim 7] Divide a periphery into eight equally at eight radii, and clockwise, if said eight radii are made into the first radii, the second radii, the third radii, the fourth radii, the fifth radii, the sixth radii, the seventh radii, and the eighth radii The appearance of a girdle is a ball for an ornament characterized by being constituted with the bowstring of the bowstring of the bowstring of said first radii and said second radii, said third radii, and said fourth radii, said fifth radii, and said sixth radii, said seventh radii, and said eighth radii.

[Claim 8] It is a ball for an ornament given in claim 1 characterized by the facet of the part corresponding to said radii part of said girdle being common in the facet of the pavilion of a round brilliant cut among the pavilions of said ball for an ornament thru/or any 1 term of 7.

[Claim 9] The pavilion of said ball for an ornament is a ball for an ornament given in claim 1 characterized by giving the step cut thru/or any 1 term of 8.

[Claim 10] The pavilion include angle of said ball for an ornament is a ball for an ornament given in claim 1 characterized by being for 38 to 42 degrees thru/or any 1 term of 9.

[Claim 11] The crown include angle of said ball for an ornament is a ball for an ornament given in claim 1 characterized by being for 30 to 38 degrees thru/or any 1 term of 10.

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## DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the ball for an ornament.

[0002]

[Description of the Prior Art] The ball for an ornament suitable for an ornament is made to many of precious stones, such as a diamond, a ruby, and sapphire, and half-precious stones (the following, jewel) by cutting into rough. In that case, a cut is performed to rough so that a jewel can appreciate most beautifully in consideration of the crystal structure of a jewel etc.

[0003] The conventional cut is illustrated to drawing 6. Drawing 6 (a) is drawing showing a round brilliant cut. This cut is known as a cut on which a diamond glitters most, and is often used for the cut of a diamond.

[0004] Drawing 6 (b) is drawing showing an oval brilliant cut. This cut is deformation of a round brilliant cut. Other deformation of MAKIZU, a heart shape, a pair shape, etc. occurs.

[0005] Drawing 6 (c) is drawing showing a princess cut. Drawing 6 (d) is the Flanders cut. Drawing 6 (e) is a marigold cut. This cut is used in many cases, when it is rough with comparatively little thickness.

[0006] Drawing 6 (f) is drawing showing a square emerald cut. This cut is often used for emerald. Drawing 6 (g) is drawing showing the Ceylon cut. This cut is often used for sapphire or a ruby. The rough of sapphire or a ruby is obtained in the configuration near the ellipse form where the angle was able to be taken, in many cases. Therefore, a cut which accumulates a trapezoid on the lower part (pavilion) of a cut is performed so that the magnitude of rough may be employed efficiently. The cut which accumulated this trapezoid facet is called step cut. In addition, there is oval deformation of un-illustrating also in this Ceylon cut.

[0007]

[Problem(s) to be Solved by the Invention] Drawing 7 is drawing explaining the procedure which cuts down the ball for an ornament of a round brilliant cut from diamond rough.

[0008] Drawing 7 (a) is drawing showing the example of the configuration of diamond rough. As shown in drawing 7 (a), generally diamond rough 100 is obtained as the crystal of octahedron. In order to cut down the ball for an ornament of a round brilliant cut shown in drawing 6 (a) from this octahedron, rough is cut in drawing 7 (b) and a procedure as shown in (c).

[0009] First, as shown in drawing 7 (b), the rough octahedron 100 is divided to two, and the piece 101 of a crystal and the piece 102 of a crystal are obtained. Drawing 7 (c) is drawing which looked at the piece 102 of a crystal shown in drawing 7 (b) from the direction of an arrow head 200. As shown in drawing 7 (c), according to the base of the downward square spindle which forms a part of piece 102 of a crystal, the ball for an ornament of a round brilliant cut is cut down. The ball for an ornament which can be obtained by this cut has the largest case where it has the circular girdle inscribed in the base of a square spindle. Therefore, in the round brilliant cut, the problem that only the small ball for an ornament was obtained was considering the magnitude of rough.

[0010] The cut of polygons, such as a princess cut, the Flanders cut, and a square emerald cut, might be used to cut down the bigger ball for an ornament taking advantage of the octahedron which is the configuration of diamond rough. However, although balls for an ornament, such as a princess cut and a square emerald cut, were large, there was a problem that it did not not much often shine.

[0011] Moreover, when arranging the ball for an ornament to a metal generally, the ball for an ornament is fixed to a metal by forming a pawl. In case a pawl is formed, a pawl divides the ball for an ornament so that wrap area may be lessened if possible, so that the ball for an ornament may not hide in a pawl. Furthermore, the pawl itself is small, and it divides so that it may decrease, so that a pawl may not spoil the fine sight of accessories.

[0012] Drawing 8 is drawing showing the example in the case of making the circular ball for an ornament close and arranging. Drawing 8 (a) shows the example in the case of making drawing 8 (b) close and arranging in two or more trains, when making the circular ball 103 for an ornament close and arranging in one train. As shown in drawing 8 (a), even if it arranges the circular ball 103 for an ornament in one train, a gap is made between the circular balls 103 for an ornament. Since the circular ball 103 for an ornament is fixed to a metal in such arrangement, as for a pawl 104, the ball 103 for an ornament is formed up and down in many cases.

[0013] Furthermore, when it fixes the ball for an ornament to a metal by arrangement as shown in drawing 8 (b), a pawl 105 is formed in the part which four balls 103 for an ornament approached most in many cases. Since the ball 103 for an ornament is circular, the part which the balls for an ornament touch is a point, and the gap made among four balls 103 for an ornament becomes large. Therefore, since four balls 103 for an ornament were fixed to a metal, there was a problem that the comparatively big pawl 105 had to be used.

[0014] Moreover, since the gap made among four balls 103 for an ornament became large, it had the problem that a metal appeared from the gap between the balls 103 for an ornament. The example in the case of arranging the ball for an ornament of a square and an octagon to drawing 9 is shown. Drawing 9 (a) shows the example in the case of making the square ball for an ornament close and arranging in one train. As shown in drawing 9 (a), the square ball 106 for an ornament makes one side close to the adjacent ball for an ornament, and is arranged at one train. A gap is not made at all between the balls 106 for an ornament. In order to fix the ball 106 for an ornament to a metal, a pawl 107 is formed in the upper and lower sides of the ball 106 for an ornament.

[0015] When making the square ball 106 for an ornament close and arranging two trains, balls for an ornament other than the ball for an ornament located in both ends will be close with the ball for an ornament with which three of four sides adjoined each other. When arranging three or more trains, it will be close with the ball for an ornament with which all four sides adjoined each other. Therefore, there will be no part in which a pawl is formed. Therefore, it was made close in the case of the square ball for an ornament, and it had the problem that two or more trains could not be arranged.

[0016] Drawing 9 (b) and (c) show the example in the case of making the ball for an ornament of a regular octagon close, and arranging in one train and two trains or more, respectively. As shown in drawing 9 (b) and (c), the ball 108 for an ornament of a regular octagon makes one side close to the adjacent ball for an ornament, and is arranged at one train and two trains or more. Since a gap is between the balls 108 for an ornament, a pawl 109 or a pawl 110 can be formed in the gap. However, the magnitude of a certain amount of [ still ] pawl was required.

[0017] This invention can be greatly started from rough, and aims at offering the ball for an ornament which often shines. In case this invention is close the ball for an ornament and arranges [ a ball ], it aims at offering a ball for an ornament with which the gap between the balls for an ornament does not become large.

[0018] In case this invention is close the ball for an ornament and arranges [ a ball ], it aims at offering the ball for an ornament which is easily fixable to a metal with a small pawl.

[0019]

[Means for Solving the Problem] In order to solve the above-mentioned problem, according to this invention, a girdle is made into the appearance which cut off each polygonal top-most vertices with radii in the ball for an ornament. Thereby, straight-line parts are made close among the girdles of two or more balls for an ornament, and a pawl can be formed in the gap formed among curvilinear parts among girdles. Since curves are radii, a gap becomes narrow. Therefore, it becomes possible to make a pawl small. Moreover, since the gap is narrow, the problem that a metal appears from a gap is also solved.

[0020] Moreover, a polygon can be considered as a square. Furthermore, a polygon is made into a square and the central angle corresponding to the above-mentioned radii can also be considered as 45 degrees. Thereby, when diamond rough is octahedron, it becomes possible to cut down the big ball for an ornament taking advantage of the configuration.

[0021] Moreover, a polygon is a square, and the central angle corresponding to the above-mentioned radii can also make a table into the square formed of the parallel straight line to each straight-line part of a girdle further, when it is 45 degrees. Moreover, it is also possible to make the length of one side of a table the same as the die length of the straight-line part of a

girdle. Thereby, the big parts of the table of a round brilliant cut or the Ceylon cut and area of the table of the ball for an ornament concerning the appearance of the girdle of a round brilliant cut or the Ceylon cut, overlap, and this invention in many of appearances of the girdle of the ball for an ornament concerning this invention overlap. Therefore, when cutting down the ball for an ornament concerning this invention by RIKATTO from the ball for an ornament of a round brilliant cut or the Ceylon cut, it becomes possible to reduce that the magnitude of the original ball for an ornament decreases.

[0022] As for the facet of the part corresponding to the radii part of a girdle, it is possible among the pavilions of the ball for an ornament to also make it common in the facet of the pavilion of a round brilliant cut further again. It enables this to reduce that the magnitude of the ball for an ornament by above-mentioned RIKATTO decreases. Moreover, it also becomes possible to obtain the ball for an ornament which often shines.

[0023] It is also possible to give a step cut to the pavilion of the ball for an ornament concerning this invention further again. A step cut can be given to a part or the whole of a pavilion. Even if it is the case where the ball for an ornament concerning this invention is cut down by RIKATTO [ the cut ball for an ornament ] by this even if it is the case where the ball for an ornament concerning this invention is cut down from rough, taking advantage of the configuration of the original rough or the ball for an ornament, it becomes possible to obtain the ball for an ornament concerning big this invention.

[0024] The pavilion include angle of the ball for an ornament can also be considered as for 38 to 42 degrees further again. The crown include angle of the ball for an ornament can also be considered as for 30 to 38 degrees. When it is the jewel in which the ball for an ornament has a critical angle near a diamond or a diamond by considering as such an include angle, it becomes possible to strengthen brightness of the ball for an ornament.

[0025]

[Embodiment of the Invention] Drawing 1 is drawing showing the ball for an ornament concerning the first operation gestalt of this invention. Drawing 1 (a) is [ a top view and drawing 1 (c) of a front view and drawing 1 (b) ] bottom views. Rear view, a left side view, and a right side view appear similarly to a front view. The ball 1 for an ornament concerning this operation gestalt is equipped with a girdle 2, crown 3, a pavilion 4, the curette 5, and a table 6. A girdle 2 is the periphery of the ball for an ornament which divides between the crown 3 which is the upper part of the ball for an ornament, and the pavilions 4 which are the lower part of the ball for an ornament. When setting the ball 1 for an ornament to a base, this girdle 2 is held by the pawl. The curette 5 is the tip of the bottom of the ball 1 for an ornament, and the small field (facet) is established in many cases. A table 6 says the big facet of crown 3 located most up.

[0026] The facet 7 of the configuration which resembled the Western kite among the facets which constitute crown 3 is called a kite facet or bezel facet. The facet 8 ranging from the girdle 2 to the curette 5 is called Maine pavilion facet among the facets which constitute a pavilion 4.

[0027] As shown in drawing 1 especially drawing 1 (b), and (c), the ball 1 for an ornament concerning this operation gestalt is the appearance from which the girdle 2 cut out each polygonal top-most vertices with radii. The above-mentioned radii are in more detail on the periphery which set the core of a table 6 as the core of a circle. In addition, a polygon is a square. In drawing 1, a square is a square and the central angle corresponding to radii is 45 degrees.

[0028] In drawing 1 (a), the angle on which a crown include angle, a girdle 2, and the Maine pavilion facet 8 make the angle which a girdle 2 and the bezel facet 7 make is called pavilion include angle. The matter has a critical angle respectively. Total reflection of the beam of light which generally carries out incidence from a dense medium by the incident angle beyond a critical angle to an interface to a \*\*\*\* medium optically is carried out. Here, total reflection means the phenomenon in which all are reflected without a beam's of light entering into a \*\*\*\* medium. When rough is sufficiently large, the beam of light which carries out incidence from the upper part of the ball for an ornament with careful attention to this critical angle is reflected up, and the above-mentioned crown include angle and a pavilion include angle are prepared in many cases so that the beam of light which carries out incidence from a lower part may be made to penetrate upwards. When the ball 1 for an ornament is a diamond, a crown include angle is for 30 to 38 degrees, and a pavilion include angle can shine best, when it is for 38 to 42 degrees.

[0029] In order to make it the ball for an ornament of a diamond often shine, there are some important matters. An above-mentioned crown include angle and an above-mentioned pavilion include angle are also one of them. The facet of a pavilion is mentioned as further important matter.

[0030] As shown in drawing 1 (c), there is a facet which forms a star type with four top-most vertices in the pavilion 4 of the ball for an ornament concerning this operation gestalt. The facet which forms this star type has the facet which faced each other, respectively. Since it is a square star type, there will be 2 sets of facets which faced each other.

[0031] Suppose that the beam of light carried out incidence to one of the facets which form a square star type from the crown side of the ball for an ornament. This facet reflects the beam of light which carried out incidence toward the facet which faces. The reflected light which carried out incidence to the facet which faced each other is further reflected so that it may return to the crown side of the ball for an ornament again. That is, the beam of light which carried out incidence from the crown side is reflected so that it may return to a crown side again. Here, the group of the facet which faced each other has a common shaft. The facet is carrying out the configuration which becomes symmetrical about this shaft. Therefore, a beam of light is not distorted in case it reflects twice in the facet which faced each other. For this reason, since the ball for an ornament concerning this operation gestalt returns again the light which carried out incidence from crown to crown and that beam of light is not distorted further, the reflected light is sharp.

[0032] Moreover, the beam of light reflected by the facet with an acute angle gives a strong impression visually rather than the beam of light generally reflected by the facet with many obtuse angles. The facet of an above-mentioned pavilion has an acute angle. Therefore, compared with the cut of the conventional polygon, for example, an emerald cut, a marigold cut, etc., the ball for an ornament concerning this operation gestalt more often shines.

[0033] Drawing 2 is drawing explaining the magnitude of the ball for an ornament concerning this operation gestalt which can be started from rough. The case of diamond rough is explained as an example. The crystal of a diamond is usually octahedron. Octahedron is carrying out a configuration which made the base of two square spindles rival. The path of the

girdle of the ball for an ornament needs to be settled in the base of the above-mentioned square spindle. In drawing 2, a square 10 shows the base of the square spindle which constitutes a part of above-mentioned crystal octahedron. The circle 11 shown by the dotted line is inscribed in a square 10. This circle 11 shows the appearance of the girdle of the ball for an ornament of the round brilliant cut obtained from a crystal. The graphic form 12 shown as the continuous line shows the appearance of the ball for an ornament concerning this operation gestalt acquired from a crystal. As shown in drawing 2, the ball for an ornament concerning this operation gestalt serves as a configuration which cut off each square top-most vertices round with radii. Therefore, according to this invention, taking advantage of the magnitude of the square 10 in which the appearance of a crystal is shown, the bigger ball for an ornament than the conventional round brilliant cut can be cut down. According to count, from the rough which can be quarried out only about 0.878k if it is usually the ball for an ornament of a round brilliant cut, when the crystal rough of the most ideal diamond is processed most ideally, if it is a ball for an ornament concerning this operation gestalt, about 1k can be started. Therefore, enough taking advantage of the magnitude of diamond rough, it becomes possible to obtain the bigger ball for an ornament compared with the former. In addition, the above-mentioned description is applied to all the rough of not only diamond rough but the same configuration.

[0034] Generally there is dispersion in quality in the rough of a jewel. Quality means the existence of the color of rough, \*\*\*\* of a color, the existence of an impurity, the existence of a blemish, etc. Accuracy does not understand this quality until it cuts rough. Therefore, it may not purchase with rough but the ball for an ornament with which it was cut and quality became clear may be purchased. However, the cut ball for an ornament is not the configuration which a purchaser desires in many cases. In that case, it becomes what (henceforth RIKATTO) the cut ball for an ornament is again cut for so that it may become a desirable configuration. This approach is often used for the comparatively small ball for an ornament.

[0035] The explanatory view in the case of cutting down the ball for an ornament concerning this operation gestalt by RIKATTO to drawing 3 is shown. Here, the case, RIKATTO [ the ball for an ornament of a round brilliant cut ] as an example, is explained. Drawing 3 (a) shows the crown of a round brilliant cut. Drawing 3 (b) shows the crown of the ball for an ornament concerning this operation gestalt. Drawing 3 (c) shows signs that the crown of a round brilliant cut and the crown of the ball for an ornament concerning this operation gestalt were piled up.

[0036] In drawing 3 (c), each top-most vertices of the octagon which constitutes the table of a round brilliant cut are clockwise set to R1, R2, R3, R4, R5, R6, R7, and R8. The square which constitutes the table 6 of the ball 1 for an ornament concerning this operation gestalt makes R2, R4, R6, and R8 of the octagon which constitutes the table of a round brilliant cut top-most vertices so that drawing 3 (c) may show.

[0037] Straight-line R2-R4, straight-line R4-R6, straight-line R6-R8, and straight-line R8-R2 carry out the point of crossing the circle which shows the appearance of the girdle of a round brilliant cut to S1, S2, S3, S4, and S5, S6, S7 and S8 clockwise. The girdle 2 of the ball 1 for an ornament concerning this operation gestalt is constituted by radii S1-S2, bowstring S2-S3, and radii S3-S4, bowstring S4-S5, radii S5-S6, bowstring S6-S7, radii S7-S8, and bowstring S8-S1.

[0038] Since the round brilliant cut is symmetrical with  $1/8$ , the central angle corresponding to radii S1-S2, radii S3-S4, radii S5-S6, and radii S7-S8 is 45 degrees, and bowstring S2-S3, bowstring S4-S5, bowstring S6-S7, and bowstring S8-S1 become the same die length. A table 6 serves as the die length as bowstring S2-S3 with the same die length of one side with a square.

[0039] As mentioned above, the girdle 2 of the ball 1 for an ornament concerning this operation gestalt consists of a straight line and radii, and the radii which constitute a girdle 1 are on the periphery which set the core of a table as the core of a circle. Therefore, there are many parts which overlap the periphery which forms the girdle of a round brilliant cut.

[0040] It returns to drawing 1 (c) and the pavilion 4 of the ball 1 for an ornament concerning this operation gestalt is described. As shown in drawing 1 (c), the facet of the part corresponding to the radii part of a girdle 2 of the ball 1 for an ornament concerning this operation gestalt is the same as that of the facet of the pavilion of a round brilliant cut among pavilions 4. On the other hand, as for the facet of the part corresponding to the straight-line part of a girdle 2, the step cut is given among pavilions 4.

[0041] When cutting down the ball for an ornament concerning this operation gestalt from an above-mentioned thing from the ball for an ornament of a round brilliant cut, it is possible to cut down the ball for an ornament concerning this operation gestalt, without spoiling the magnitude of the ball for an ornament of a round brilliant cut as much as possible. Therefore, it enables reduction of the magnitude of the ball for an ornament which is the greatest demerit in RIKATTO to decrease. When cutting down the ball for an ornament concerning this operation gestalt by RIKATTO [ the ball for an ornament of the most ideal round brilliant cut ] according to count, the reduction in magnitude becomes about 7%.

[0042] The comparatively small balls for an ornament of becoming the principal part of a design by it one in the design of accessories, such as a ring, are rare. In many cases, it is used with other balls for an ornament as one of the components of a design. Therefore, although it is required also of the comparatively big ball for an ornament, the comparatively small ball for an ornament is required to be the configuration which can have a degree of freedom also in the part in which it can fix to a metal easily using a small pawl, and a pawl is formed especially.

[0043] Drawing 4 is drawing showing the example in the case of making close the ball 1 for an ornament concerning this operation gestalt, and arranging. Drawing 4 (a) shows the case where it has arranged in one train, and drawing 4 (b) shows the case where it has arranged in two or more trains.

[0044] As shown in drawing 4 (a) and (b), the bays of the girdle of the ball 1 for an ornament are made close, and it can arrange. Therefore, since a big gap is not made between the balls for an ornament even if it makes the ball for an ornament close and arranges like the conventional circular ball for an ornament, the ball for an ornament is easily fixable to a metal using a small pawl. Moreover, the problem that a metal looks large from the gap between the balls for an ornament is also solved.

[0045] Furthermore, according to this operation gestalt, the gap between the balls for an ornament is formed in the curvilinear part of a girdle. A pawl is formed in this gap. As shown in drawing 4 (a) and (b), even if according to this invention it makes one or more trains close and arranges the ball for an ornament, the gap in which pawls 30 and 31 are formed is

formed. In the case of the square ball for an ornament, when two or more trains were made close and having been arranged, since a gap was not formed between the balls for an ornament, there was a problem of it becoming impossible to form a pawl, but the ball 1 for an ornament concerning this operation gestalt does not produce such a problem.

[0046] According to the ball 1 for an ornament concerning this operation gestalt, the ball for an ornament can be fixed further again by forming a pawl in the small gap formed between the curvilinear parts of a girdle 2. The gap formed in the radii section of a girdle is more small compared with the ball for an ornament of the conventional octagon. The pawl with which it appears that the gap formed between the balls for an ornament is small on the field formed with the ball for an ornament will be small. Therefore, it becomes possible to fix the ball 1 for an ornament to a metal easily by the pawl smaller than the ball for an ornament of an octagon.

[0047] Drawing 5 is drawing showing the ball for an ornament concerning the second operation gestalt of this invention. Drawing 5 (a) is [ a top view and drawing 5 (c) of a front view and drawing 5 (b) ] bottom views. Rear view, a left side view, and a right side view appear similarly to a front view. The ball 21 for an ornament concerning the second operation gestalt is also equipped with a girdle 22, crown 23, a pavilion 24, the curette 25, and a table 26. Although a girdle 22, crown 23, and the curette 25 are the same as that of the ball 1 for an ornament concerning the first operation gestalt, pavilions 24 differ. As for the pavilion 24 of the ball 21 for an ornament concerning the second operation gestalt, the step cut is given to the whole. In the Ceylon cut, although the facet of crown is the same as that of the facet of a round brilliant cut, as for the pavilion, the step cut is given. The ball 21 for an ornament is equipped with many facets of the above-mentioned Ceylon cut, and common facets. Therefore, when and cutting down the ball for an ornament, rather than the case where the ball 1 for an ornament is cut down, the direction in the case of cutting down the ball 21 for an ornament has little reduction of the magnitude of the ball for an ornament, and ends. [ cut / Ceylon ] Therefore, the ball 21 for an ornament concerning the second operation gestalt of this invention is suitable especially when RIKATTO [ the ball for an ornament of the Ceylon cut ].

[0048] The ball 21 for an ornament concerning the second operation gestalt is also equipped with the advantage of the decrement of magnitude being reduced compared with the original ball for an ornament when RIKATTO which is easily fixable to a metal from the advantage with which the ball 1 for an ornament concerning the above-mentioned first operation gestalt is equipped, for example, rough, with the small pawl which can cut down the big ball for an ornament.

[0049] As mentioned above, although the operation gestalt of this invention was explained, this invention is not limited to the operation gestalt mentioned above, and other various modification is possible for it. For example, in the operation gestalt of this invention, although the configuration carried out based on the round shape was explained, even if it is the case, RIKATTO [ an oval brilliant cut and the oval Ceylon cut ], etc., it is contained within the limits of the technical thought of this invention. In this case, the curve of the girdle of the ball for an ornament serves as an arc on the same ellipse, and a table serves as a rectangle.

[0050]

[Effect of the Invention] According to this invention, it can start greatly from rough and it becomes possible to obtain the ball for an ornament which often shines.

[0051] According to this invention, in case it is close and the ball for an ornament is arranged, it becomes possible to obtain a ball for an ornament with which the gap between the balls for an ornament does not become large. Moreover, in case according to this invention the ball for an ornament is made close and it arranges, it becomes possible to obtain the ball for an ornament which is easily fixable to a metal with a small pawl.

[0052] Moreover, even when RIKATTO [ according to this invention / the already cut ball for an ornament ], it becomes possible to obtain the ball for an ornament concerning this invention, reducing reduction of the magnitude of the original ball for an ornament.

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## DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing the ball for an ornament concerning the first operation gestalt of this invention.

[Drawing 2] It is drawing explaining the magnitude of the ball for an ornament concerning this invention which can be started from rough.

[Drawing 3] It is drawing explaining the case where the ball for an ornament concerning this invention is cut down by RIKATTO.

[Drawing 4] It is drawing showing the example in the case of making close the ball for an ornament concerning this invention,

and arranging.

[Drawing 5] It is drawing showing the ball for an ornament concerning the second operation gestalt of this invention.

[Drawing 6] It is drawing showing the example of the conventional cut.

[Drawing 7] It is drawing explaining the procedure which cuts down the ball for an ornament of a round brilliant cut from diamond rough.

[Drawing 8] It is drawing showing the example in the case of making the circular ball for an ornament close and arranging.

[Drawing 9] It is drawing showing the example in the case of making close the ball for an ornament of a square or an octagon, and arranging.

[Description of Notations]

1 21 Ball for an ornament

2 22 Girdle

3 23 Crown

4 24 Pavilion

5 25 Curette

6 26 Table

7 Bezel Facet

8 Main Pavilion Facet

10 Square

11 Circle

12 Appearance of Ball for Ornament Concerning this Invention

30 31 Pawl

R1, R2, R3, R4, R5, R6, R7, R8 Point

S1, S2, S3, S4, S5, S6, S7, S8 Point

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[Translation done.]

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2.\*\*\* shows the word which can not be translated.

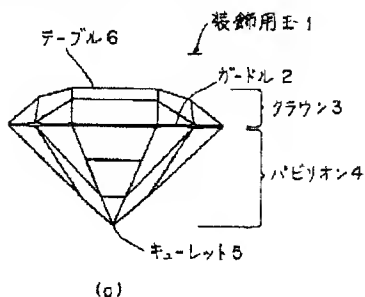
3.In the drawings, any words are not translated.

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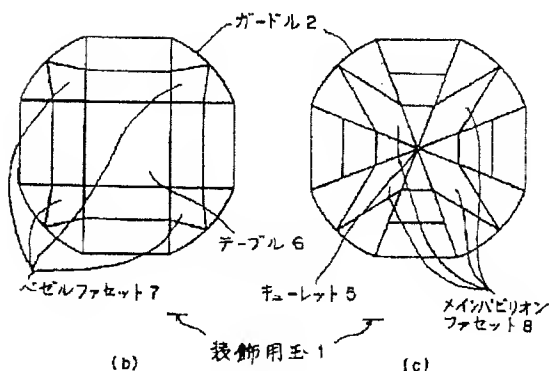
## DRAWINGS

[Drawing 1]

本発明の第一実施形態に係る装飾玉を示す図



(a)

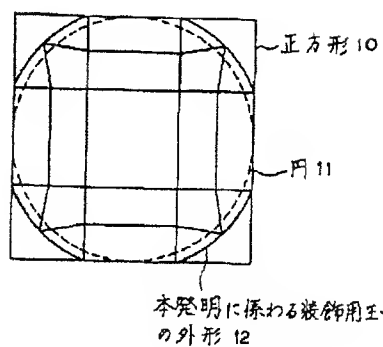


(b)

(c)

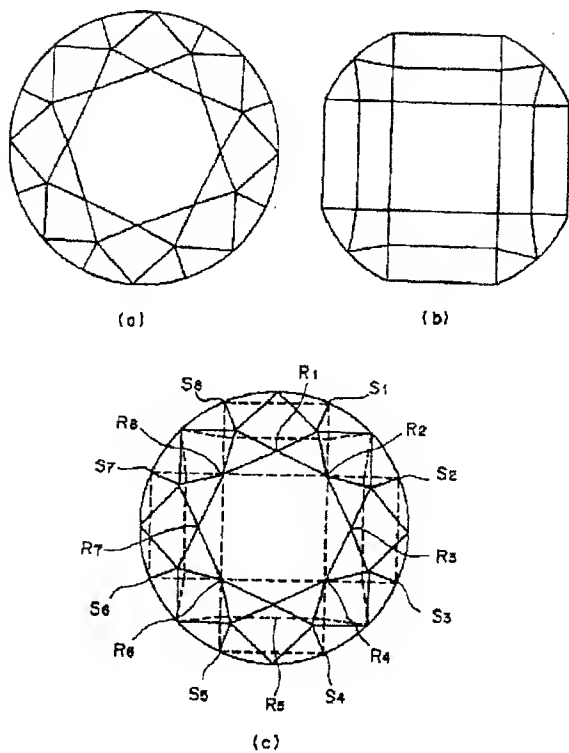
[Drawing 2]

原石から切り出すことである。  
本発明に係わる装飾用玉の  
大まかさを説明する図



[Drawing 3]

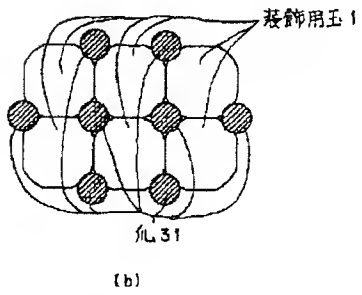
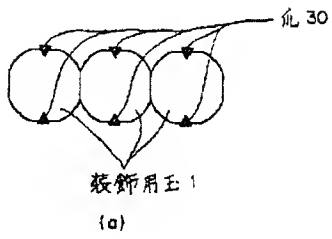
本発明に係わる装飾用玉を  
リカットにより切り出す場合を説明する図



[Drawing 4]

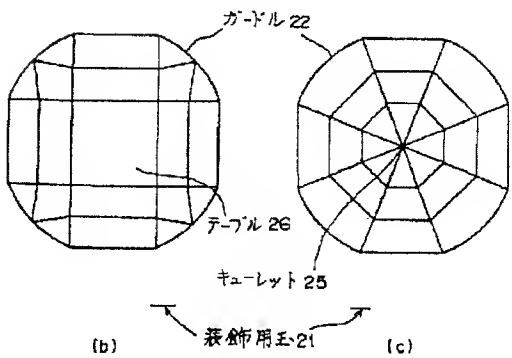
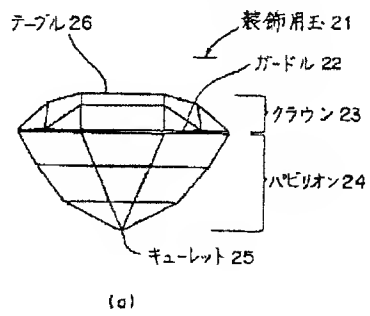


本発明に係わる装飾用玉を  
密接させて配置する場合の例を示す図



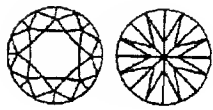
# [Drawing 5]

本発明の第二実施形態に係わる装飾用玉を示す図

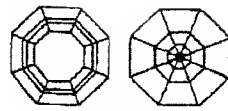


# [Drawing 6]

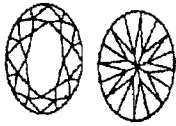
従来のカットの例を示す図



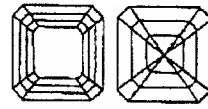
(a)



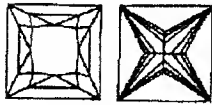
(e)



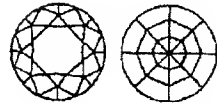
(b)



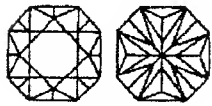
(f)



(c)



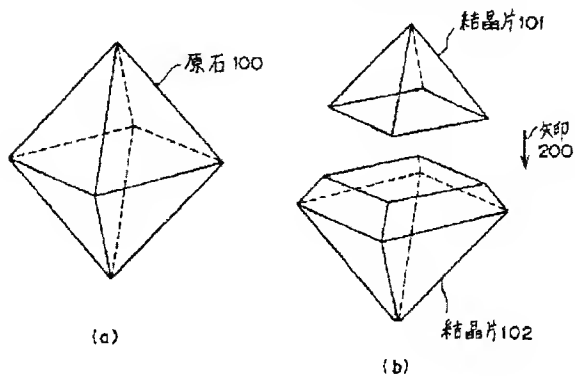
(g)



(d)

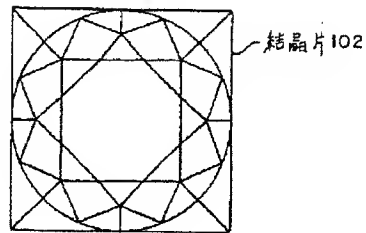
[Drawing 7]

ダイヤモンドの原石からラウンドブリリアントカットの  
装飾用玉を切り出す手順の説明図



(a)

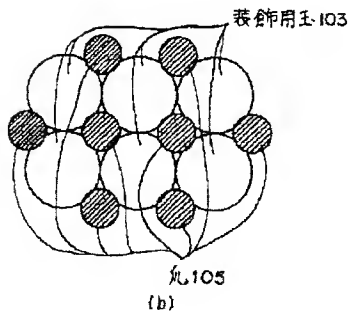
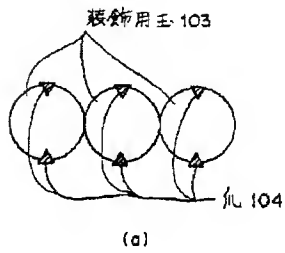
(b)



(c)

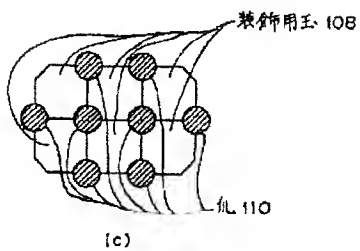
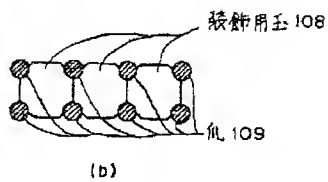
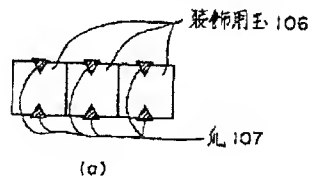
[Drawing 8]

円形の装飾用玉を密接させて  
配置する場合の例を示す図



# [Drawing 9]

四角形又は八角形の装飾用玉を  
密接させて配置する場合の例



[Translation done.]

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WRITTEN AMENDMENT

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----- [a procedure revision]

[Filing Date] July 31, Heisei 12 (2000. 7.31)

[Procedure amendment 1]

[Document to be Amended] Specification

[Item(s) to be Amended] Claim

[Method of Amendment] Modification

[Proposed Amendment]

[Claim(s)]

[Claim 1] It is a ball for an ornament,

The table of the square formed by connecting alternately the top-most vertices of the octagon which constitutes the table of a brilliant cut or the Ceylon cut,

The girdle of a segment parallel each side of said square formed by excising the girdle of said brilliant cut or the Ceylon cut,

It is a step cut to the part between the girdle of said segment, and each side of the table of said square, and between the girdle of said segment, and the curette,

The ball for an ornament characterized by \*\*\* (ing).

[Claim 2] If said periphery is equally divided into eight at eight radii and said eight radii are clockwise made into the first radii, the second radii, the third radii, the fourth radii, the fifth radii, the sixth radii, the seventh radii, and the eighth radii,

The appearance of said girdle is a ball for an ornament according to claim 1 characterized by being constituted with the bowstring of the bowstring of the bowstring of said first radii and said second radii, said third radii, and said fourth radii, said fifth radii, and said sixth radii, said seventh radii, and said eighth radii.

[Claim 3] Said girdle is a ball for an ornament according to claim 1 or 2 characterized by being the die length parallel to each side of said table, and same.

[Claim 4] claim 1 characterized by the pavilion include angle of said ball for an ornament being for 38 to 42 degrees thru/or 3 -- either -- the ball for an ornament of a publication.

[Claim 5] claim 1 characterized by the crown include angle of said ball for an ornament being for 30 to 38 degrees thru/or 4 -- either -- the ball for an ornament of a publication.

[Claim 6] It is the approach, RIKATTO [ the ball for an ornament of a brilliant cut or the Ceylon cut ],

A square table is formed by connecting alternately the top-most vertices of the octagon which constitutes the table of said ball for an ornament,

The girdle of said ball for an ornament is excised so that the girdle of a segment parallel each side of said square may be formed,

A step cut is given to the facet between said formed girdle and each side of the table of said square, and between said girdles and curette which were formed,

The RIKATTO approach characterized by including a process.

[Claim 7] Said girdle is made into the die length parallel to each side of said table, and same,

The RIKATTO approach according to claim 6 characterized by including a process further.

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[Translation done.]